User Manual

Sliding gate: Delta / Orion

Motor: Type ZT /IT 06

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1. GENERAL

1.1 Manufacturer / supplier

Manufactured by: Heras Productie Maatschappij b.v.
Hekdam 1, 5688 JE Oirschot The Netherlands

Supply and assembly: Dealer name
Street
Place

1.2 Using this manual

This user manual gives you a description of how the cantilever sliding gate, hereinafter referred to as the 'gate', should be operated and what action should be taken in the event of breakdown. This document also deals with the maintenance and safety aspects.

The contents of this document are intended for the operator of the gate and for the technician responsible for its installation.
The technician will use a separate manual for installation of the motor on the gate. This will include an assembly diagram for the said motor and this will operate in conformity with the Dutch NEN 1010 standard.
For technical defects of whatever nature, a qualified dealer name technician must be consulted.

1.3 Definitions of User / Operator / Technician

User: Anyone using the gate
Operator: A user who is familiar with all safety aspects dealt with in this document. The operator is not permitted to carry out any installation work on the gate unless explicitly specified.
Technician: The technician is the person appointed by the dealer name (including a client's employee specifically appointed for this purpose by Heras) who is qualified to carry out technical work on the gate.

1.4 Service / Maintenance

In the event of problems, defects or questions, please contact:

Dealer Service **Telephone: 0*******
Fax: 0*****

Copies of this manual can be (re)ordered via the telephone or fax number listed above.

1.6 Conformity with European guidelines:

Installation is carried out in conformity with the following EU Guidelines.
98/37 EC Machinery Directive
73/23 EEC Low voltage Directive
89/336/EEC EMC Directive (electromagnetic compatibility)

The declaration of conformity can be found in appendix B.
The CE–mark is affixed to the motor unit.
The nameplate is affixed on the rear side of the gate

2 Safety when using and during work in progress

2.1 Safety in general, view of opening

NL) HOUDT VOLDOENDE AFSTAND BIJ IN BEWEGINGZIJNDE POORT
D) WENN TOR IN BEWEGUNG IST, AUSREICHENDEN ABSTAND HALTEN
GB) KEEP A SAFE DISTANCE WHEN THE GATE IS IN MOTION
F) RESTEZ SUFFISAMMENT À L'ÉCART DU PORTAIL LORSQU'IL SE TROUVE EN MOUVEMENT
HERAS

Despite all safety and precautionary measures, the following aspects must be taken into account when using the gate:

- The direct vicinity of the gate must remain within view.
- Whilst the gate is in motion it is strictly forbidden for any external object to come into contact with the gate so that it becomes obstructed.
- Keep a safe distance when the gate is in motion. Warning signs have been put in various places for this purpose.
- Keep the passage of the gate free of snow and ice.

For gates with a dead man override (often without safety precautions, see 3.5), it must be possible to oversee the opening and the entire movement of the gate.

2.2 Safety during work in progress and when installing

Safety regulations

- Before using the gate for the first time, the user must read the user manual in full. The safety regulations in the manual must be observed at all times. Improper use can lead to unexpected hazards and is therefore forbidden.
- When the gate is being installed, the mains switch needs to be set to the “off” position and protected against unauthorised activation.
- If the gate needs to be operated manually, the installation device in the motor unit must be set to the “off” position and secured (e.g. with a lock) to prevent activation.
- Ensure that motor unit is always closed during use. The motor unit must only be opened by a technician with electro-technical qualifications.

For Heras gates the following applies: “Safety” takes precedence over “Control” and “Opening” takes precedence over “Closing”.

2.3 Safety precautions on the gate

2.3.1 Personal safety and regular inspection

Depending on the configuration of the gate and the adjacent fencing, safety strips will be affixed at various points where there is a risk of jamming.
See Appendix A: Installation of personal protection device
The safety strips should be inspected visually regularly (once a month) to check that they are undamaged and work properly.

The procedure for inspection is as follows:

- All safety strips intended to prevent jamming when *opening* the gate are checked by pressing when opening. The gate will stop immediately and reverse direction. The *transmit opening* or *stationary opening* LED will light up.
- All safety strips intended to prevent jamming when *closing* the gate are checked by pressing when closing. The gate will stop immediately and reverse direction. The *transmit closing* or *stationary closing* LED will light up.

If these do not work, the gate should be deactivated since safety cannot be guaranteed. You should contact the Service / Maintenance (see 1.4)

2.3.2 Emergency Stop

The gate is fitted with an *emergency stop device,* which can stop the motion of the gate at any time! Activating the gate is only possible when the emergency stop has been switched off.

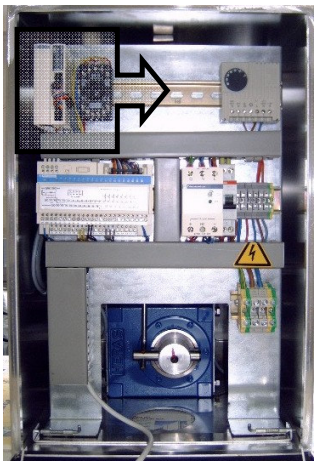
2.3.3 Infrared / vehicle protection device in opening (optional)

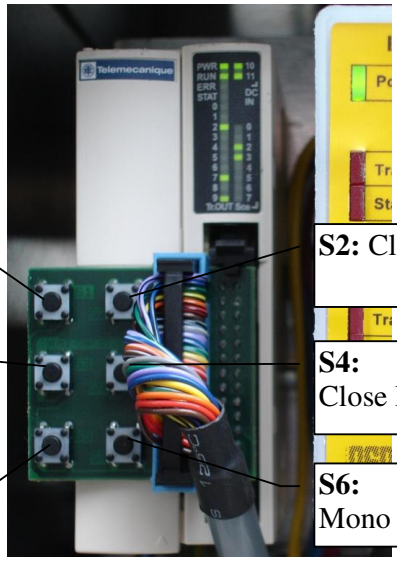
This protection device prevents the gate closing when vehicles pass through the opening. If the device is activated when the gate closes, the motion of the gate will stop and it will open fully. It is possible to resume closure of the gate when the opening is clear; for *automatic closing* this will occur automatically after the pre-set time.
The aforementioned mechanism is required to be checked every month.

3 Installing and operating the gate

3.1 Controls in motor unit

The controls of the motor unit on the gate correspond to the options which have been agreed with the user. The configuration is determined beforehand and approved in writing by the customer on delivery. For operating:





S1: Open

S2: Close

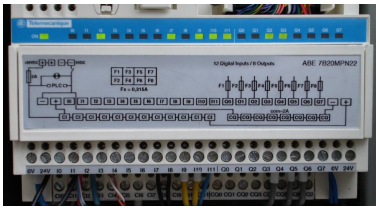
S3: Dead Man Open

S4: Close Hold to Run

S5: Initialize

S6: Mono dial control

3.2 Installation, initialisation (technician)



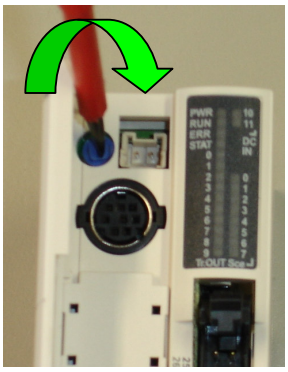
There is an electrics diagram in the motor unit showing the connections.
Read “2.2 Safety during work in progress and when installing ” beforehand

1. Ensure that the motor unit has a 230 VAC connection and automatic installation is **on**.
2. Disconnect the motor (3.7).
3. First check that the proximity switch is connected properly. Close the gate in an open position and check that the LED **I.7** is off. If not, the **I.7** and **I.8** need to be switched. Close the gate to check that the **I.8** light is off. This is **extremely** important since the safety precautions will not work properly otherwise!
4. Push the gate leaf to a position anywhere between open and closed and lock the motor unit (3.7).
5. The initialisation procedure is started by operating **S5** (3.1). The gate leaf will start “learning” open and closed positions at a safe speed. The gate will close automatically when it reaches the closed position. The **I.8** light will be off.
6. Now give the *open* command by operating **S1** (3.1) and check which LED is lit, **Q4** or **Q5**? Note on the electrics diagram in the unit the correct indication with **Q4** and **Q5** by crossing out one of the two actions.

3.3 Impulse control (operation by means of a short signal)

If installation and connection of the protection devices has been performed correctly, the gate can be opened or closed with **S1/S2** or with the operating components provided for this purpose. If several users operate the gate, the OPEN command will take precedence over the CLOSE command.

3.4 Automatic Closing (technician)



If potentiometer is completely turned to the left the gate will **not** close automatically. If the meter is turned to the right, the automatic closing starts after 2 up to maximum of 90 seconds.

3.5 Operating the dead man override (in the event of breakdown)

A dead man override is an option for a gate without a personal protection device or which has a defective protection device (2.3). Operation should only be possible from a position where the opening (see 2.1) is visible.
To open or close the gate at a safe speed, **S3** or **S4** can be pressed respectively. The gate will continue to move only if the **S3/S4** stay pressed in.

3.6 Repairing defects

If the gate does not respond to the control unit being operated the following procedure should be followed:

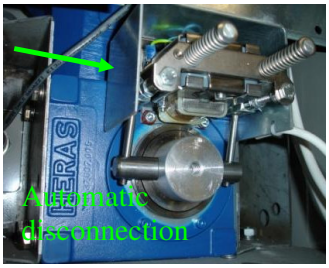
1. Check that the emergency stop is activated. If necessary, deactivate and operate again.
2. Check whether any of the personal protection devices have been damaged or are pressed in – on the ISK display a red LED will be visible. See 2.3.1 Personal safety and regular inspection .
3. If necessary, recommence installation; switch the installation unit to "off" and switch on again after a minute.

If the defect remains, you should contact Service / Maintenance (1.4). No further work on the gate installation may be carried out by the user in order to prevent hazardous situations occurring.

3.7 Manual operation in the event of a breakdown

The motor wheel in the motor unit housing (for the *standard* motor) can be manually disconnected from the electro-motor.

1. Open the motor unit housing (using a key!)
2. The installation setting should be set to "off".
3. Pull the disconnection lever towards you – it is now possible to open and close the gate manually.



4. When locking again, when moving the gate, allow the worm to fall into place in the worm wheel.
5. Close the motor unit housing when finished!

Option: Models with automatic disconnection on power failure can be identified by a coil; this will automatically disconnect on power failure. See photograph.

4 Use and technical specifications of the gate

4.1 Description of sliding gate

The gate is to seal off the site perimeter. This manual deals with the powered (cantilever) sliding gates.

Leaf	Delta	Orion	SHB
Length [m]	[5.15-12.5]	[7.0-16.6]	[3.2-5.1]
Height [m]	[1.0- 3.0]	[2.0- 2.5]	[1.5-2.5]
Max. weight [kg]	[120,340]	[220,550]	[85-180]
Runner wheels	PA6G210	PA6G210	PA6G210
	cantilever	cantilever	rail

4.2 ZT/ IT and ET motor with personal protection device

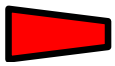
Type of motor	ZT [1]	IT	ET
Type	HR80	HR80	EST 824
Max Torque [Nm]	80	80	12
Duration of engagement	60%	60%	
Power supply	230V 50Hz	230V 50Hz	230V 50Hz
Capacity [kW]	0.37	0.37	
IP value of motor + gears	54	54	
Controls	PLC	PLC	MO43
IP value of motor unit	54	54	56
Crawl speed [m/s]	0.25	0.13	0.10
Max. speed [m/s]	0.5	0.25	0.17
Personal protection device	GE 499	GE 365	GE 365[2]

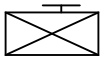
[1] See installation manual and electrics diagram
[2] Personal protection device depends on torque setting

Appendix A: Installation of personal protection device

Below are the guidelines for the installation of the personal protection devices on the sliding gate. There may be differences to what is customary in each country.
The diagram shows the gate when viewed from above, for a ZT unit which is required to be positioned to the rear of the personal protection device.

Explanation of symbols:

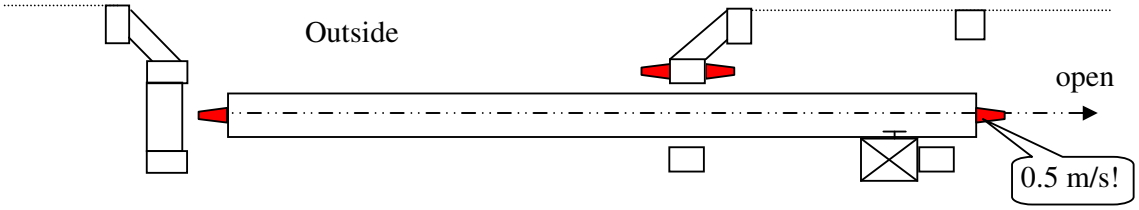

Personal protection strip


Motor unit

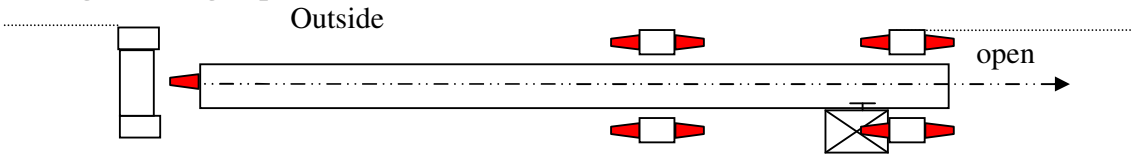
Duo gatepost

Line of mesh/fencing

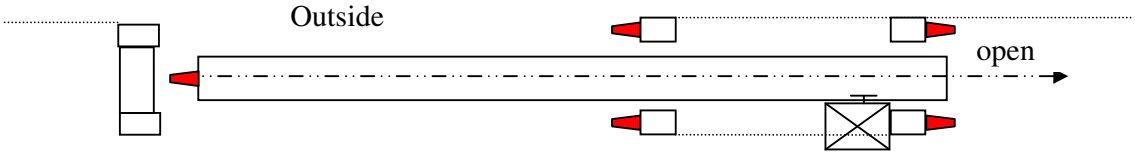
Delta gate with Duo gateposts (single upper wheel 3x)



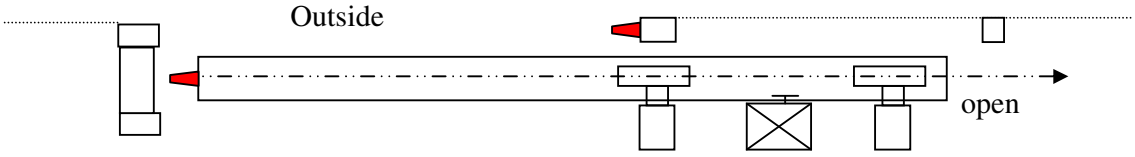
Delta gate with gateposts (9x)



Delta gate with gateposts (mesh between posts 5x)



Orion gate with wheel posts (no upper guide)



Appendix B: EC Declaration of conformity

Heras Fencing Systems BV, Oirschot, hereby declares that the sliding gate hereinafter described, conforms to the requirements of the committee made on 14 June 1989 in respect of the standardisation of the machine directives of the member states and the accompanying modification directives.

Type of sliding gate installation	Delta ZT / IT
EU directives applicable	98/37 EG Machinery Directive
	73/23 EEG Low Voltage Directive
	89/336/EEG EMC Directive (electro-magnetic compatibility)
Harmonised standards applicable	
	EN 12100-1 / EN 12100-2
	EN 1050: 1996
	EN 954
	EN 1760-2
	EN 60204-1 1997
	EN 50081-1
	EN 50082-1
	EN 12453: 2000
	EN 12445: 2000
	EN 13241-1: 2003
	EN 12604: 2000
	EN 12605: 2000

And further declares that it is forbidden for anyone to operationalise the complete installation (gate and motor unit) before the “machine” has been found and to be declared to be in conformity with the requirements of the machine directive 98/37/EC, and with national legislation pursuant to this directive.

Oirschot , 5 January 2006

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Mr. H. Welting

Managing Director Heras Fencing Systems BV